

# December 2018

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BACKGROUND IMAGES (FROM 2018 JOINT SCIENTIFIC RETREAT)

See **Credits page** online

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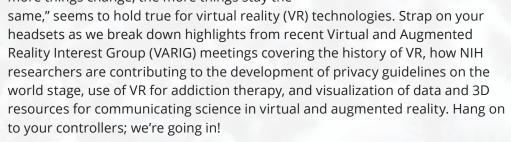
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# Virtual and Augmented Reality Interest Group Meeting Recaps

By Jeremy Swan

"Plus ça change, plus c'est la même chose" (Jean-Baptiste Alphonse Karr, *Les Guêpes*, January 1849), commonly translated as "The more things change, the more things stay the



#### HISTORY OF VIRTUAL REALITY

While VR is taking the world by storm as the buzziest new mainstream technology, the most recent iterations are only the latest in a spectrum of immersive technologies intended to transport a viewer to another place.

At the October 2018 VARIG meeting, Dr. John Ostuni, a staff scientist in the National Institute of Neurological Disorders and Stroke (NINDS), dove into the history (and pre-history—and pre-pre history) of VR, beginning 17,000 years ago in Lascaux, where prehistoric peoples created depictions of animals in a cave in what is now the French countryside. Panoramic paintings covering all surfaces in the visual field, accessible only by descending into a cave by lantern, could be considered one of the first uses of "virtual reality." Whether the animal cave was used for religious ceremonial purposes, or sharing knowledge about hunting, we will never know; but it would certainly have served as an immersive experience, travelling from the real world into a pictorial representation.

Moving forward in time, Sir Charles Wheatstone, an English scientist and inventor, described an effect reproducing stereovision in an 1838 paper (read **more**) about tricking the brain to see two-dimensional objects in three

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the arts

### Letter from the Editor

In science, we are trained to interpret reality through experimentation. What we see is not necessarily what *is*, depending on controls, variables, and background knowledge. So you would think that, as a skeptical scientist, I would be less susceptible to the mindbending effect of virtual reality (VR).

The first time I tried VR was in my friend's basement. He had the works. There were sensors all over the room, computer monitors glowing bright with VR apps, wires hanging from the ceiling, walls, and maybe even the floors—I lost track of what connected to where. I couldn't imagine that a pair of fighter-pilot-looking scuba goggles with earphones could possibly transport me to another reality. But oh boy, was I wrong.

From the moment I entered the VR world, I was no longer in a basement. I was in an elevator ascending slowly to the top floor of a skyscraper building. The doors opened, and I could hear the wind, birds, and hustle and bustle of a city below. Lacking an innate fear of heights, I walked out onto a plank protruding from the elevator door, fifty stories high, proud of myself that I tackled it with ease. But then my friend,

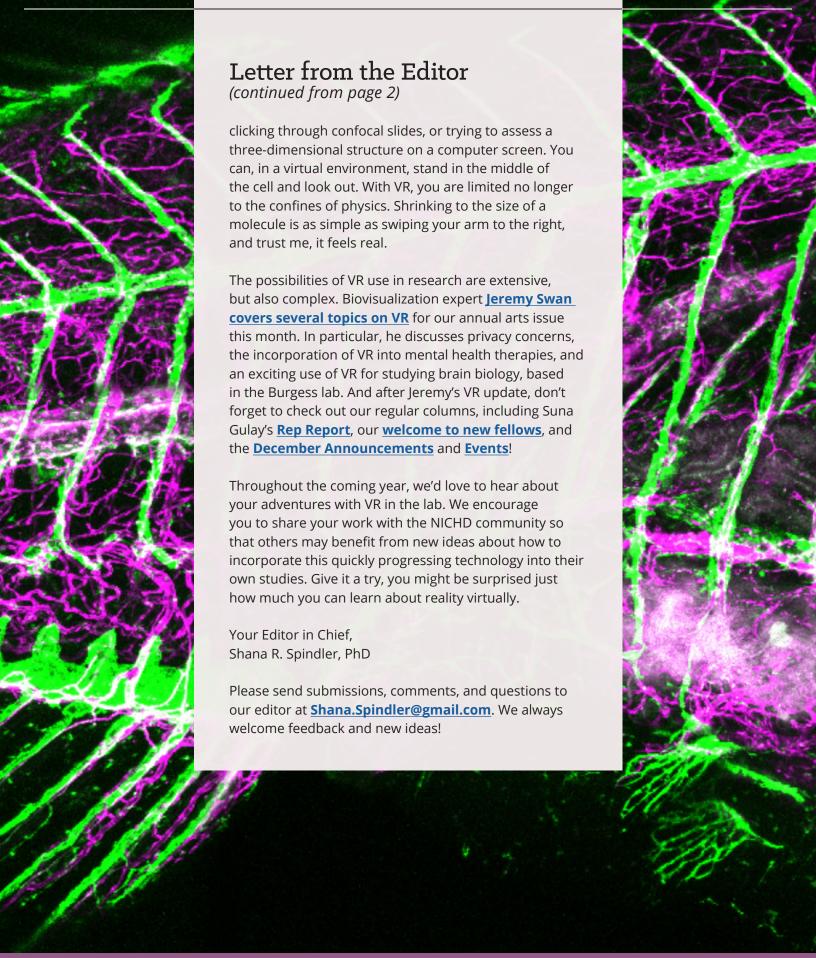
knowing all-too-well the power of VR, gave a single command, "Jump."

Now bear in mind, I could still feel carpet under my feet. I could hear my friends giggling behind me as I stood, paralyzed in place, unwilling to move even an inch. No matter how many times I reminded myself that I was standing on a floor, not a plank, I couldn't jump. By this point, giggles had turned to laughter, and my intentions to leap were immediately thwarted by my brain's overriding will to survive, keeping my feet firmly planted in place.

After at least ten minutes, and with several assurances from my friends that I was NOT going to fall to my death, I managed to jump. Rather than the expected gravity-assisted plummet, I smoothly descended toward the ground, where my brain tricked me once more with a slight stomach lurch upon landing. I was forever convinced that VR can provide something more than novelty. It. Feels. Real.

Now imagine that instead of an elevator, you're standing in the center of a cell with proteins lit up in a colorful display that can be spun, enlarged, and explored from any angle. Forget

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# Virtual and Augmented Reality Interest Group Meeting Recaps

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dimensions using images from different perspectives. And many readers will remember the Viewmaster, which launched one hundred years later in 1938. With 1.5 billion reels of color photographs, it may be the most successful product based on stereovision ever.

After describing these first stereo vision-based products, Dr. Ostuni's presentation highlighted early iterations of VR, beginning with the first head-mounted display, called "The Sword of Damocles," which was so heavy that it was mounted to the ceiling above, but allowed the wearer to walk around. The Air Force's Visually Coupled Airborne System Simulation (VCASS), completed in 1982, was another innovative system, which would put the Atari to shame.

Part one of the two-part "History of VR" presentation ended with the success of VR via Google Cardboard, Oculus Rift, HTC Vive, and Samsung Gear VR. We also learned that the Brendan Iribe Center for Computer Science and Innovation at the University of Maryland in College Park is opening soon (collaboration anyone?), funded by—you guessed it—Brendan Iribe, the co-founder of Oculus, with a \$31 million donation in 2014.

Part two of the History of VAR session continues in January. Join the listserv at <a href="https://oir.nih.gov/sigs/virtual-augmented-reality-scientific-interest-group-varig">https://oir.nih.gov/sigs/virtual-augmented-reality-scientific-interest-group-varig</a> for more information.

#### VR AND PRIVACY CONCERNS

One of the biggest concerns in the virtual and augmented reality (VAR) development community is privacy, shared Dr. Susan Persky, an investigator with the National Human Genome Research Institute (NHGRI), who utilizes VR technology in her research. Dr. Persky presented to a full house at the November 2018 VARIG meeting held at the NIH Library. Fresh from back to back VR meetings in Palo Alto, California, and the World Economic Forum in Dubai, United Arab Emirates, she shared insights into some of the topics that leaders in the VR community are contemplating, in particular those discussed at the Palo Alto meeting.

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# Virtual and Augmented Reality Interest Group Meeting Recaps

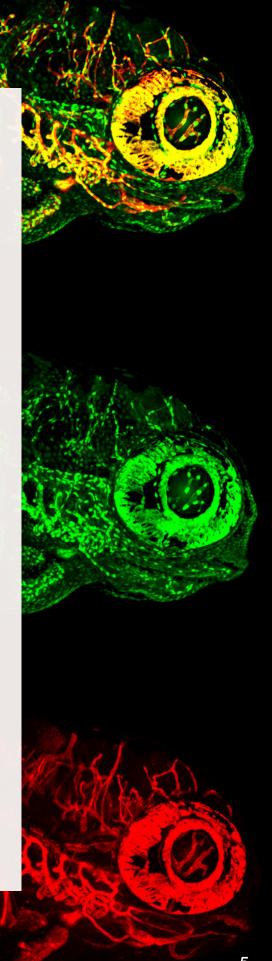
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VR systems currently track 18 "Degrees of Freedom," in addition to cameras embedded in the most popular VR headsets for room mapping. Twenty minutes in VR produces two million data points, which could potentially be analyzed by third parties, such as advertisers. It's possible to "fingerprint" who is using VR, for instance, by analyzing distances between the controller and headset. Inferences could potentially be made into a person's gender, cognitive abilities, sexuality, and physical fitness, to name some of the possibilities. The popular Netflix Sci-Fi series "Black Mirror" has explored how innovative technologies could be used for nefarious purposes. With emerging technologies such as eye and facial tracking, it's possible to know more about people than they may even know about themselves, and then use that information in real time for persuasion.

Leaders in the VR community were recently invited to the World Economic Forum to participate in discussions based around the "4th Industrial Revolution," which builds on digital technology and encompasses, but is not limited to, artificial intelligence, VAR, 3D printing, autonomous vehicles, and quantum computing. Dr. Jeremy Bailenson, Director of the Stanford Virtual Human Interaction Lab, together with Sandra Lopez, Senior Vice-President, Immersive Experiences, Intel Corporation, co-chaired the Global Future Council on Virtual and Augmented Reality to explore ways in which privacy could be protected, including a decentralized identity, or a new construct modeled on an Institution Review Board (IRB) used in clinical research, or the European Union's General Data Protection Regulation.

Objectives of the group included outlining solutions for mitigating risks created by emerging VAR technologies. For example, creating a privacy agreement template for data-tracking or generating agreements for collected data to expire and not be stored indefinitely could go a long way in protecting privacy. Additionally, an application or plug-in could be developed to help consumers visualize and understand what data is

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# Virtual and Augmented Reality Interest Group Meeting Recaps

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being tracked (akin to the open source Mozilla Lightbeam plug-in for Firefox). Another approach would be to incentivize the protection of privacy, allowing monetization alongside controlled access to collected data.

#### **VR FOR THERAPY**

Noah Robinson, a former postbac fellow at NIH, is now working as a clinical psychology graduate student with the Hollon Research Group at Vanderbuilt University, where he is exploring how VR can be used to treat addiction. While presenting to the VARIG group in November, Noah explained that he has been testing the use of VR at an inpatient rehabilitation center.

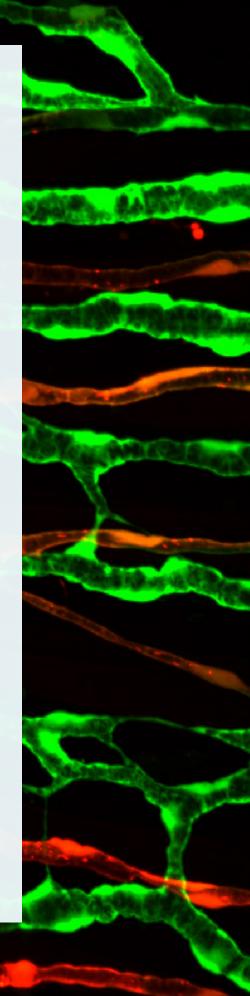
VR therapies, which utilize techniques such as cognitive behavioral immersion, are affordable, accessible, and scalable. Noah recently received a National Science Foundation travel grant to conduct 100 interviews on the use of VR to treat addiction. It's generally faster and easier for someone with an opioid use disorder to virtually visit a therapist or reach support than it is to visit a therapist in person. Entering VR also changes the perception of your physical space, allowing a person to "leave" an environment that contributes to negative feelings or triggers for using. Other therapeutic uses of VR include: negative arousing stimuli, exposure to carefully controlled stimuli, therapy for Post-Traumatic Stress Disorder, and Exposure Response Prevention for drug use. Noah recently founded his own company, Very Real Help, LLC, to quickly develop applications (apps) for engaging in VR therapy.

#### VR AT NICHD - ZEBRAFISH BRAIN BROWSER 2.0

The Zebrafish Brain Browser (zbbrowser.com) app, developed in the Burgess lab, allows users to search for and visualize transgene and gene expression patterns of larval zebrafish brains. As part of the app, the Burgess lab has developed a VR environment for volumetric rendering of image stacks representing whole brain scans of zebrafish embryos. They decided early on to build on the Google cardboard platform for the most widespread distribution without the need for specialized and expensive hardware.

Chris Hurt, a computer sciences undergraduate student at Virginia Tech, worked in the Burgess lab as a summer student to give the *Zebrafish Brain Browser* app a major facelift and add new features, including "spatial search,"

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# Virtual and Augmented Reality Interest Group Meeting Recaps

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which provides the ability to select a region of interest and then sort by the level of expression data (volume occupancy) contained within. The first iteration of their app relied on the user to convert brain scans to 3D objects before viewing in VR, but Chris' work allowed for direct manipulation of imaging data within the browser window. Now, users can turn on or off various brain regions, change colors, adjust brightness/contrast for each set of data, and even upload their own original image stacks to compare to other lines in the browser—the number of expression lines available has grown to 300.

The browser is open source and completely free; other groups can use the code directly. Find it here on GitHub: <a href="https://github.com/BurgessLab/">https://github.com/BurgessLab/</a>
<a href="mailto:ZebrafishBrainBrowser">ZebrafishBrainBrowser</a>. Learn more about Zebrafish Brain Browser on the Burgess lab <a href="mailto:website">website</a>, plus check out an example <a href="mailto:publication">publication</a> highlighting the app!

#### INTERESTED IN VR?

If you'd like to learn more about virtual and augmented reality at the NIH, check out the following resources and articles:

- » <a href="https://www.nihlibrary.nih.gov/about-us/news/">https://www.nihlibrary.nih.gov/about-us/news/</a> virtual-reality-consulting-service
- » <a href="https://oir.nih.gov/sigs/virtual-augmented-reality-scientific-interest-group-varig">https://oir.nih.gov/sigs/virtual-augmented-reality-scientific-interest-group-varig</a>
- » <a href="https://science.nichd.nih.gov/confluence/display/newsletter/2016/09/09/Virtual+Reality+as+a+Tool+for+Scientific+Research">https://science.nichd.nih.gov/confluence/display/newsletter/2016/09/09/Virtual+Reality+as+a+Tool+for+Scientific+Research</a>
- » <a href="https://irp.nih.gov/blog/post/2018/03/">https://irp.nih.gov/blog/post/2018/03/</a> <a href="straight-out-of-star-trek-the-biomedical-boon-of-virtual-reality">https://irp.nih.gov/blog/post/2018/03/</a> <a href="straight-out-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star-trek-the-biomedical-boon-of-star
- » <a href="https://www.genome.gov/27570878/2018-reddit-ama-nih-researchers-highlight-virtual-reality-research-on-reddit/">https://www.genome.gov/27570878/2018-reddit-ama-nih-researchers-highlight-virtual-reality-research-on-reddit/</a>

# The Rep Report

By Suna Gulay, PhD

As the current NICHD Basic Sciences IC Representative, I represent NICHD postdoctoral fellows at the FelCom meeting every month and share the latest news with you here. Do you have a concern or question that you want brought up at the next meeting? Contact me at <a href="mailto:suna.gulay@nih.gov">suna.gulay@nih.gov</a>!

Dear NICHD fellows,

Exciting news this month! Many NICHD fellows joined the FelCom recently:

- » Abhi Subedi (Burgess lab) became the FelCom liaison to the PRAT program
- » Cynthia Abou Zeid (Kaler lab) was elected as a liaison to the NIH Child Care Board in summer
- » Anshika Jain (Rouault lab) was elected co-chair to the FelCom Mentoring Committee in September
- » Mona Wu Orr (Storz lab) was elected as a liaison to the NIH Women Scientist Advisors Committee
- » Sara Young (Dever lab) became a co-chair to the FARE Award Committee in November

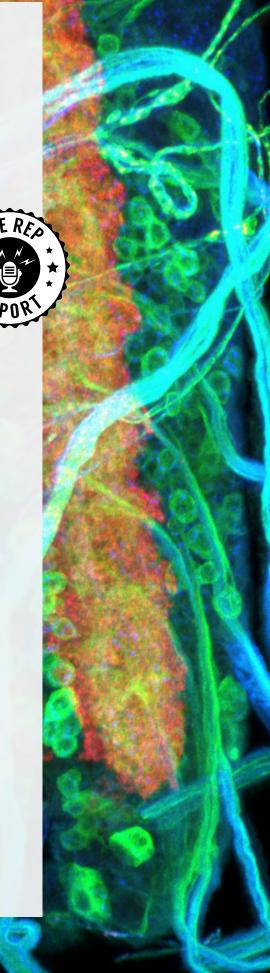
#### Congrats to all!

The FARE Award Committee is looking for new members! This is a group of fellows from various institutes committed to supporting and fostering research excellence. If you would like to gain peer review experience and learn how award-granting mechanisms work, please contact the co-chairs **Sara Young** and **Helen Michael** to join.

The Career Development Committee will host a panel on "Careers in Medical Affairs" on December 12, 3-5 p.m., in Bldg. 35, Room 640. Medical affairs cover roles such as medical science liaison, clinical liaison, regulatory reviewer, regional scientific manager, medical manager, and scientific affairs manager.

The Visiting Fellows Committee (VFC) regularly organizes networking events with postdocs and grad students from various DC area universities, including George Washington University and Georgetown University, and agencies (NIST, FDA, and NASA). You can follow these events through <a href="the VFC website">the VFC website</a>. The next one will take place on December 7, starting at 6 p.m. at the Bier Baron Tavern in DC.

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# The Rep Report

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FelCom Social Committee and Public Relations
Committee have created a Facebook group where any NIH postdoc or clinical fellow can join and share social event news, and a Google group for buying/selling/housing advertisements. While the groups are named



"Bethesda Postdocs," they are open to NIH postdoctoral, visiting, and clinical fellows from all Maryland campuses. You can request to join these groups using the hyperlinks above and answering a couple of questions to verify your postdoctoral appointment.

Please note that these are **not** NIH sponsored groups, nor are they endorsed by the NIH. You should not subscribe to these groups using your government email address. If you attend events advertised through these, you are not representing the NIH and should not represent yourself as such.

FAES fellows' health insurance changes were implemented last month and will not be finalized until next year. On the positive side, the coinsurance decreased for out-of-network, outpatient mental health office and hospital visits (no coinsurance for office visits, 5-percent coinsurance for hospital visits). Prescription drugs and medical insurance will be subjected to a joint out-of-pocket maximum (bringing the total to \$2,500 down from \$5,000). On the negative side, infertility benefits have been discontinued for new patients (current patients will continue to be covered for 12 months). This is in line with the Federal Employee Plan and healthcare benefit plans of peer institutions. A 5-percent coinsurance has been introduced to several benefits. A copay has been introduced for ambulance benefits.

Please contact FAES for more details and for any questions you have. FAES will revisit these changes, especially regarding the infertility coverage, with scientific directors and training directors throughout the year.

Happy Holidays!

### Meet Our New Fellows

We are happy to welcome new fellows to the NICHD family. If you arrived recently to the NICHD and would like us to introduce you in our quarterly "Meet Our New Fellows" column, please contact our editor, Dr. Shana Spindler, at <a href="mailto:Shana.Spindler@gmail.com">Shana.Spindler@gmail.com</a>.

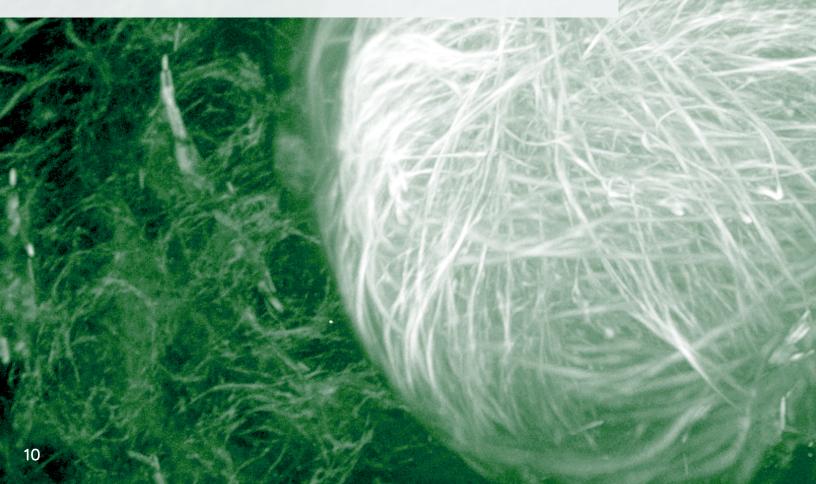


# SARAH FRAIL Postbac Fellow

Home city: Socorro, New Mexico Undergraduate institution: University of Maryland, College Park

Maryland, College Park
NICHD mentor: Dr. Pedro Rocha

Area of research: I am using a new low input genome-wide sequencing method to study the genetic and epigenetic factors involved in determining the outcome of the second embryonic cell fate decision during early development both in vitro and in vivo.



### NICHD Intramural Year in Review for 2018

A look back at Intramural NICHD fellow accomplishments during 2018:

The NICHD DIR, with the help of the **Retreat Steering Committee**, held the Fourteenth Annual Meeting of Postdoctoral, Clinical, and Visiting Fellows and Graduate Students at the National Museum of the American Indian on April 20, 2018. NICHD Scientific Director Dr. Constantine A. Stratakis kicked off the retreat with a warm welcome, followed by an insightful keynote presentation by Dr. Yvette Seger, Director of Science Policy at the Federation of American Societies for Experimental Biology. Check out the full recap **here!** 

**Dr. Cynthia Abou Zeid**, a postdoctoral fellow in the Kaler lab, received the Royal Society of Chemistry Travel Award for Best Oral Presentation for her talk titled "Targeted Next Generation DNA Sequencing for Newborn Screening of Menkes Disease to Prevent Neurological Damage" at the Eleventh International Copper Meeting in Sorrento, Italy on September 23, 2018.

**Dr. Skand Shekhar**, a clinical endocrinology fellow, presented "Hypothyroidism in Erdheim Chester Disease: Experience from the National Institutes of Health" at the 6<sup>th</sup> International Erdheim-Chester Disease Patient and Family Gathering in Orlando, Florida, on November 15 and 16, 2018.

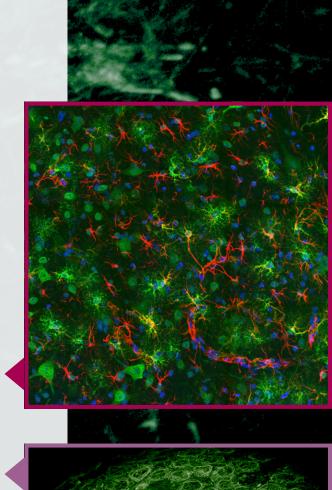
**Dr. Jakob Gutzmann**, a postdoctoral fellow in the Hoffman lab, placed third in the 2018 Three-minute-Talk (TmT) Competition, which included fellows from the NICHD, NHGRI, NIDCR, NIAMS and NEI.

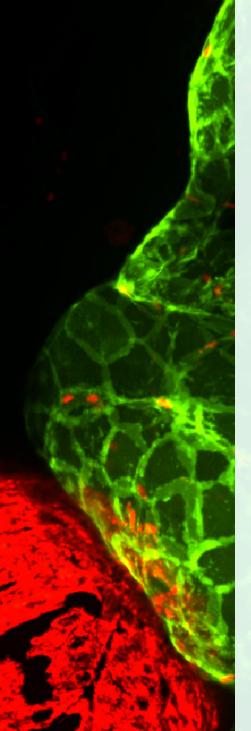
**Jacob Gluski**, a postbac in the Le Pichon lab, won the 2018 Fellows Retreat Image Competition with his image of an *ex vivo* slice of spinal cord from a mouse model of neurodegeneration.

**Dan Castranova**, an aquatic research specialist in the Weinstein lab, won the 2018 NICHD DIR-DIPHR Scientific Retreat Image Competition with his image of microtubules in the zebrafish embryo eye.

**Dr. Marina Venero Galanternik** received the NICHD Fellow Mentor of the Year Award. She was nominated by her mentees, Ryan Gober (postbac) and Tuyet Nguyen (summer intern), and her advisor, Dr. Brant Weinstein.

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# NICHD Intramural Year in Review for 2018 (continued from page 11)

**Dr. LiQi Li** received the NICHD Investigator Mentor of the Year Award. She was nominated by her mentee, Daniel Stamos (postbac).

**Dr. Jeremy Luk** received the DIPHR Fellow Mentor of the Year Award. He was nominated by his mentees, Kellienne Sita (postbac) and Jacob Miller (summer student), and his colleague Dr. Ulrike Klenke (OITE).

**Dr. Stephan Gilman** received the DIPHR Investigator Mentor of the Year Award. He was nominated by his mentee, Kuba Jeffers (postbac).

Twenty-six NICHD fellows received the 2019 Fellows Award for Research Excellence (FARE Awards) at the 2018 Annual NIH Research Festival (complete list <a href="https://example.com/here">here</a>).

During the 2018 Postbac Poster Day, a total of 11 NICHD postbacs received an Outstanding Poster Award for scoring within the top 20-percent (NIH-wide, complete list here).

**Jillian Belgrad** (Fields Lab), **Anne Davidson** (Machner Lab), **Brian Kim** (Stopfer Lab), and **Bruna Viana** (Pacak Lab) received the 2018 NICHD "Best" postbac poster awards for the 2018 Postbac Poster Day.

**NICHD postbacs** were accepted into 22 professional schools for MD, PhD, or MD/PhD programs, including: Cornell University; University of Pennsylvania; University of California, Los Angelas; California Institute of Technology; Berkley University; Johns Hopkins University; and the Harvard-MIT Program in Health Sciences and Technology!

#### A big THANK YOU to all of our 2018 newsletter contributors:

Ashwin Bhandiwad, Dylan T. Burnette, Dani Cai, Samantha Crowe, Justin Demmerle, Allison Dennis, Larissa Erben, Erin Gray, Carlos M. Guardia, Suna Gulay, Faith Harrow Plante, Ivaylo Ivanov, Hyun Min Jung, Stephanie Justice-Bitner, Nikki Keasey, Ari Lechsinska, Audrey Lee, Michael Lee Jr., Mitch Lee, Mengying Li, Amrita Mandal, Laura Marler, Chris McNabb, Jonathan G. Murphy, Adrienne T. Perkins, Yvette Pittman, Anika Prabhu, Maria Queralt-Martin, Anna Roberts-Pilgrim, Abby Robinson, Deepika Shrestha, Amber Simmons, Jeremy Swan, Kelly Tomins, Lauren Tracy, Christa Ventresca, Jyothsna Visweswaraiah, Robert C. Walker, Erin Walsh, and Zelia Worman.

Please submit your accomplishments for publication in the newsletter throughout the year to **Shana.Spindler@gmail.com**.

# Upcoming NIH-Wide Office of Intramural Training and Education (OITE) Events

For more information and registration, please visit **Upcoming OITE Events**.

OITE Holiday Party for Trainees (December 7)

Preparing for Tests: How to Calm Our Minds and Bodies (December 7)

**Networking for Your Career** (December 10)

Postbac Seminar Series (December 13)

Preparing for the MCAT: Test-Taking Strategies and Test Day Preparation (December 14)

# SAVE THE DATE: FEBRUARY 21, NIH GRADUATE STUDENT RESEARCH SYMPOSIUM

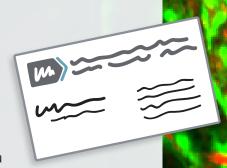
The 15<sup>th</sup> Annual NIH Graduate Student Research Symposium will be held on Thursday, February 21, 2018, 9 a.m. – 4:45 p.m. at Natcher Conference Center. The daylong event includes:

- » Keynote address
- » Elevator pitch competition
- » Student talks
- » Poster presentations of dissertation research
- » Presentation of the annual Outstanding Mentor Awards
- » The annual GPP graduation ceremony
- » NIH Graduate Student Research Awards (NGSRAs)
- » Community networking event

All graduate students performing their doctoral dissertation research at NIH are eligible and encouraged to participate (500-word abstracts). All poster presenters are eligible to compete for the NIH Graduate Student Research Awards (NGSRAs, travel awards). To submit an abstract, please visit: <a href="https://www.training.nih.gov/gsc/symposium/15th">https://www.training.nih.gov/gsc/symposium/15th</a>.

# BUSINESS CARD PRINTING NOW AVAILABLE THROUGH THE OFFICE OF EDUCATION

The Office of Education is offering business card printing for all NICHD fellows. Along with the official NICHD logo, cards can be customized to display your name and title/position, laboratory section or affinity group, and lab contact information. Please email Ms. Carol Carnahan at <a href="mailto:carnahac@mail.nih.gov">carnahac@mail.nih.gov</a> if you are interested.



# WHO NEEDS JOURNAL COVERS WHEN YOU HAVE THE DIR ANNUAL REPORT?

The NICHD Division of Intramural Research (DIR) is looking for one or more exciting scientific images, from basic and clinical research laboratories, to feature on the cover and web site of the 2018 DIR Annual Report. To submit images for consideration, please email your file to Nicki Swan (jonasnic@mail.nih.gov), or contact her if the file is too large to send by email. Submissions made as part of the 2018 NICHD DIR-DIPHR Scientific Retreat Image competition will also be considered. All entries are due by Friday, December 21, 2018.

#### CALLING ALL FELLOWS OF NICHD—IT'S IMAGE COMPETITION TIME!

We are beginning our search for the feature image of the 15<sup>th</sup> Annual NICHD Fellows Meeting.

The winning image, chosen by the Fellows Advisory Committee, will be showcased on the retreat website, on posters, and used as the front cover of the event program. Also, to highlight everyone's imagery, all submissions we receive will be used to produce a collage posted on the 2019 retreat website. You can always take a look at the image submissions from previous years at <a href="http://retreat.nichd.nih.gov">http://retreat.nichd.nih.gov</a>.

In addition to image resolution and quality, selection criteria include the relevance to our institute's mission and artistic view of the image. All submissions (at the highest possible resolution) should be sent to Nicki Swan (<a href="mailto:jonasnic@mail.nih.gov">jonasnic@mail.nih.gov</a>) by January 31, 2019 with a brief caption for the image.

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#### NICHD FELLOWS ADVISORY COMMITTEE: SEEKING NEW MEMBERS!

The Office of Education formed an advisory committee in 2016, and we are seeking several more dedicated members to help us develop and initiate academic support programs for the institute. Both domestic and visiting fellows are needed. We want to achieve a broad representation, culturally and academically, so we can address the needs of all our trainees at NICHD. The committee meets monthly to exchange ideas and informally discuss ways we can enhance and tailor the training experience within the NICHD intramural program.

Some potential topics for our committee are how to:

- » Increase the participation for training activities
- » Expose fellows to various careers in science
- » Identify teaching opportunities and internal and external research funding mechanisms
- » Establish a structure for sharing scientific and career resources within the institute

# \*New this year, the advisory committee will also steer the 15<sup>th</sup> Annual NICHD Fellows' Retreat, to be held in Spring 2019.

This includes developing the agenda/program, inviting speakers, reviewing abstracts, selecting fellow/student presenters, and moderating some of the sessions—it's a great service opportunity, plus you'll get to be part of the team that plans our biggest annual event for fellows!

Don't miss this opportunity to serve your intramural NICHD community.

### The committee meets once a month on Thursdays, 3 – 4 p.m.

Upcoming dates listed below:

- » December 6
- » January 10
- » February 14

Please contact Dr. Erin Walsh at <u>erin.walsh@nih.gov</u> if you are interested in joining the group.

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#### THE BUSINESS OF SCIENCE: YOUR GUIDE TO CAREER SUCCESS

A new training for fellows and graduate students interested in pursuing a career in industry

Coming Soon—Early 2019!

We will offer this certificate program by <u>SciPhD</u> as a four-day course in early 2019 at the NIH. Enrollment will be open for 40 NICHD trainees.

The course is designed to help academic scientists prepare for their next positions in academia, industry, or government—research or non-research. Students will experience hands-on learning of the business and social skills necessary to succeed in the professional world.

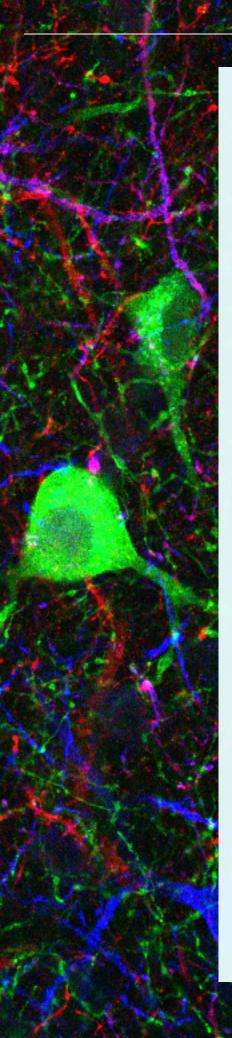
At present, the course is also offered at highly respected research institutes, such as New York University, University of California San Francisco, University of California Irvine, and the New York Academy of Sciences. Ninety percent of the people who applied for jobs while taking the course reported that *The Business of Science* helped them land an interview or job offer!

Throughout the program, you will have the exciting opportunity to:

- » Discover the many career paths in which having a PhD can make you a competitive job candidate
- » Develop your professional communication, mentoring, project management and negotiating skills, as well as your financial literacy
- » Research a job ad and identify the scientific, business, and social skills that the company is looking for
- » Develop a targeted resume that demonstrates your specific qualifications
- » Expand your science network
- » Take part in mock interviews that will prepare you for your own job searches

Course instructors will hone into common research practices that academic scientists are already familiar with, to help in the understanding of business concepts, and to demonstrate how your own experiences can mold you into a competitive job candidate.

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# AAAS MASS MEDIA SCIENCE & ENGINEERING SUMMER FELLOWSHIP Applications open October 16 – January 15!

From the AAAS Mass Media Fellowship website:

This highly competitive program strengthens the connections between scientists and journalists by placing advanced undergraduate, graduate, and post-graduate level scientists, engineers and mathematicians at media organizations nationwide. Fellows have worked as reporters, editors, researchers, and production assistants at such media outlets as the Los Angeles Times, National Public Radio, The Washington Post, WIRED, and Scientific American.

For 10 weeks during the summer, the Mass Media Fellows use their academic training in the sciences as they research, write and report today's headlines, sharpening their abilities to communicate complex scientific issues to non-specialists. Participants come in knowing the importance of translating their work for the public, but they leave with the tools and the know-how to accomplish this important goal.

For additional information about the program visit **aaas.org/mmfellowship**.

# APPLICATIONS NOW BEING ACCEPTED FOR THE 2019 NCI TECHNOLOGY TRANSFER AMBASSADORS PROGRAM (TTAP)

TTAP is a one-year program for postdocs to gain training and mentorship in biomedical invention development, commercialization and entrepreneurship.

The program is specifically designed to be completed during your postdoctoral training and requires a time commitment of eight to ten hours per week.

Previous TTAP ambassadors are employed as patent agents and technical specialists at law firms, senior associates in clinical and corporate contract resource management in academia, and health science analysist in the federal government.

For more information, including program requirements and how to apply, be sure to visit <a href="https://techtransfer.cancer.gov/aboutttc/ambassadors">https://techtransfer.cancer.gov/aboutttc/ambassadors</a>.

Please note that PI approval is required for acceptance into this program. **The application deadline is Monday, December 17, 2018.** 

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#### STUDY IN FRANCE WITH INSERM EXCHANGE PROGRAM

NICHD has established an exchange with Inserm (Institut National de la Sante et de la Recherche Medicale) in France, which provides a unique opportunity for American and French scientists to obtain postdoctoral training with French and American mentors, respectively.

We will train one fellow in DIR for a two-year period and send one "graduating" postdoctoral fellow from NICHD (visiting fellows are eligible) to a participating Inserm lab in France, for what essentially would be a second postdoc. To facilitate strong research collaborations between NICHD and Inserm, there will also be an opportunity for the awardees' mentors to visit, in both directions.

Our projected start date for trainees, for both institutes, is June 3, 2019.

If you are at the end of your training and may be interested in this program, please let the Office of Education know as soon as possible so we can work through the application process together.

NICHD fellows received an email containing the application instructions, including a list of nine Inserm laboratories that participate in the program. Applications are due to Dr. Erin Walsh (erin.walsh@nih.gov) by Monday, December 31.





## **December Events**

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MONDAY, DECEMBER 10, 10 AM – NOON New Seminar for Academic Careers Building 45 (Natcher), Conference Room F1-F2



As grad students and postdocs, we get a lot of exposure to research-based faculty positions, but what other kinds of faculty jobs are out there? Come to this seminar to learn about academic faculty positions that vary in their emphasis on teaching, research and service. Find out what it can be like for faculty at mid-sized and small universities, liberal arts and community colleges, and other kinds of faculty appointments at research-intensive universities such as lecturers and research professors.

Led by Dr. Sydella Blatch, this seminar will be a 60-minute seminar followed by Q&A session.

Dr. Blatch was an associate professor of biology at a primarily undergraduate institution and recently transitioned to a career in science administration, now working in the NIAID intramural training office.

Please contact Dr. Erin Walsh at <u>erin.walsh@nih.gov</u> if you are interested in attending this workshop.

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